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IN THE CLAIMS

- 1 1. (currently amended) A method for making measurements during drilling of a  
2 borehole, the method comprising:
- 3 (a) making measurements continuously with a formation evaluation (FE)  
4 sensor on a bottom hole assembly (BHA) ~~over a time period that includes~~  
5 ~~during said drilling of said borehole;~~
- 6 (b) concurrently making quality control (QC) measurements while said FE  
7 measurements are being made, said QC measurements including at least  
8 one measurement not related to motion of said BHA;
- 9 (c) storing samples of said FE measurements in a working memory of a  
10 processor on said BHA;
- 11 (d) analyzing said QC measurements; and
- 12 (e) based on said analysis, storing selected samples of said FE measurements  
13 in a permanent memory of said processor.
- 14
- 1 2. (original) The method of claim 1 wherein said FE sensor comprises at least one  
2 hydrophone responsive to a seismic signal from a surface source.
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- 1 3. (original) The method of claim 1 wherein said FE sensor comprises at least one  
2 geophone on a non-rotating sleeve of said BHA, said at least one geophone  
3 responsive to a seismic signal from a surface source.

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1 4. (original) The method of claim 1 wherein said at least one measurement is  
2 selected from (i) a weight on bit (WOB), (ii) flow rate of a fluid in said borehole,  
3 (iii) a level of a tube wave in said borehole, (iv) a level of motion of a non-  
4 rotating sleeve on said BHA, and (v) a measurement made by a near bit  
5 accelerometer.

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1 5. (original) The method of claim 1 wherein said QC measurements further comprise  
2 a measurement of motion of said BHA.

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1 6. (original) The method of claim 1 wherein said FE sensor comprises an  
2 accelerometer responsive to a signal from a surface source.

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1 7. (original) The method of claim 1 wherein said FE sensor comprises an acoustic  
2 sensor responsive to a signal from a source in another borehole.

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1 8. (currently amended) A method for making measurements during drilling of a  
2 borehole, the method comprising:  
3 (a) making quality control (QC) measurements using a sensor on a bottom  
4 hole assembly BHA during drilling of said borehole, said QC  
5 measurements including at least one measurement not related to a motion  
6 of said BHA;

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- 7 (b) analyzing said QC measurements;
- 8 (c) using the results of the snalysis for predicting an initial time when
- 9 measurements made by a formation evaluation (FE) sensor on said BHA
- 10 are expected to be of acceptable quality; and
- 11 (d) making measurements with said FE sensor over a time interval that starts
- 12 earlier than said initial time.

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- 1 9. (original) The method of claim 1 wherein said FE sensor comprises an acoustic
- 2 sensor responsive to a signal from a source at at least one of (i) a surface location,
- 3 and, (ii) in another borehole.

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- 1 10. (original) The method of claim 1 wherein said acoustic sensor is one of (i) a
- 2 hydrophone, (ii) a geophone, and, (iii) an accelerometer.

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- 1 11. (original) The method of claim 8 wherein said predicting is based at least in part
- 2 on measurements made by an axial accelerometer on the BHA.

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- 1 12. (original) The method of claim 8 wherein said predicting is based at least in part
- 2 on monitoring of a mud flow in said borehole.

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